



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,565

04/05/2005

Siamak Naghian

088245-0232

8011

23524 7590 05/12/2010

FOLEY & LARDNER LLP  
150 EAST GILMAN STREET  
P.O. BOX 1497  
MADISON, WI 53701-1497

EXAMINER

TRAN, PABLO N

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/12/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,565	<b>Applicant(s)</b> NAGHIAN, SIAMAK	
	<b>Examiner</b> Pablo N. Tran	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 6,22,33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-21,23-32,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8-11, 13-15, 19-21, 23-25, and 27-29, 31-32, and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740) and in view of Larson (US Pat No 4,569,042).

As per claims 1-5, 21, 23, 31-32, and 36, Chen discloses a method of routing a message from a source node to a destination node in a wireless network, wherein transmitting a first message from a source node to a destination node along a plurality of paths, wherein the plurality of paths includes a first path, and wherein the first path includes a first intermediate node and a second intermediate node (fig. 12A-12D, col. 8/ln. 33-45, col. 9/ln. 44-col. 11/ln. 2

Chen disclosed such method of timestamp of hopping one node to another node but not explicitly as claimed. Larson disclose such method of timestamp of intermediate nodes, wherein generating a first time stamp and a second time stamp at the first intermediate node, wherein the first time stamp corresponds to receipt of the first

Art Unit: 2618

message at the first intermediate node and the second time stamp corresponds to transmission of the first message from the first intermediate node to the second intermediate node; generating a third time stamp and a fourth time stamp at the second intermediate node, wherein the third timestamp corresponds to receipt of the first message at the second intermediate node and the fourth time stamp corresponds to transmission of the first message by the second intermediate node; calculating a propagation delay between the first intermediate node and the second intermediate node, wherein the propagation delay comprises a difference between the second time stamp and the third time stamp; selecting the first path from the plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay (fig. 5a, 5b, 5c, fig. 6, col. 1/ln. 60-col. 2/ln. 39, col. 2/ln. 46-col. 4/ln. 28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Chen to incorporate Larson method of time stamping to determine the delay encountered by a signal in order to select the path with the shortest time.

As per claim 7, as stated above in claim 1, the modified communication system of Chen and Larson further discloses the processing delay at a node (see Larson, col. 3/ln. 27-43).

As per claims 8-9 and 24, as stated above in claim 1, the modified communication system of Chen and Larson further discloses measuring and stored a signal quality and selecting the path based at least in part on the measured signal

Art Unit: 2618

quality (see Chen, col. 4/ln. 40-52, col. 5/ln. 1, col. 5/ln. 46, col. 14/ln. 20-21, col. 14/ln. 34-35, see Larson, col. 6/ln. 6-21).

As per claims 10-11, 25, and 35, as stated above in claim 1, the modified communication system of Chen and Larson further discloses calculating and stored a distance and selecting the path based at least in part on the calculated distance (see Chen, col. 4/ln. 40-52, col. 4/ln. 65, col. 5/ln. 5-16, see Larson, col. 1/ln. 28-36).

As per claims 13 and 27, as stated above in claim 1, the modified communication system of Chen and Larson further discloses measuring power attributes and selecting the path based at least in part on the measured power attributes (see Chen, col. 4/ln. 40-52, col. 7/ln. 21-31).

As per claims 14 and 28, as stated above in claim 1, the modified communication system of Chen and Larson further discloses assessing a link stability and selecting the path based at least in part on the assessed link stability (see Chen col. 4/ln. 40-52, col. 7/ln. 21-31, col. 14/ln. 20-21, col. 14/ln. 34-35).

As per claims 15 and 29, as stated above in claim 1, the modified communication system of Chen and Larson further discloses assessing a required QOS stability and selecting the path based at least in part on the assessed QOS (see Chen, col. 4/ln. 40-52, col. 7/ln. 21-31, col. 14/ln. 20-21, col. 14/ln. 34-35, col. 14/ln. 28-31).

As per claim 19, as stated above in claim 1, the modified communication system of Chen and Larson further discloses an adhoc wireless network (see Chen, col. 1/ln. 41).

Art Unit: 2618

As per claim 20, as stated above in claim 1, the modified communication system of Chen and Larson further discloses the intermediate node is a mobile station (see Chen, fig. 1, col. 3/ln. 45-65).

3. Claims 12, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740) in view of Larson (US Pat No 4,569,042) and further in view of Chuprun et al. (6,115,580).

As per claims 12, 16, and 26, the modified communication system of Chen and Larson further suggested such method of optimal path based upon various criteria but not explicitly based upon velocity. However, Chuprun et al. taught such method (col. 11/ln. 38-42). Therefore, it would have been obvious to one of ordinary skill at the time of invention for the modified communication system of Chen and Larson to utilize such method, as taught by Chuprun et al., in order to enhance connectivity in a wireless communications network by intelligently selecting the wireless links that provides the optimal connections between nodes in the network.

4. Claims 17-18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740) in view of Larson (US Pat No 4,569,042) and further in view of Baratz et al. (4,873,517).

As per claim 17, as stated above in claim 1, the modified communication system of Chen and Larson further discloses such routing algorithm (see Chen, col. 2/ln. 33-50) but not explicitly the claimed limitation. Baratz et al. teaches such method (fig. 3-5,

Art Unit: 2618

col. 1/ln. 64-col. 2/ln. 4, and col. 4/ln. 48- col. 5/ln. 53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for the modified communication system of Chen and Larson to utilize such teaching of Baratz et al. in order to reduce time in selecting the optimum route.

As per claims 18 and 30, as stated above in claim 1, the modified communication system of Chen and Larson further discloses such selection process to select the optimum route based upon RSSI, shortest time, least number of hop, distance, or some other measured metrics but not explicitly a mapping value that indicate a degree to which a measured parameter value meets a predefined parameter value. Baratz et al. teaches such method (fig. 4, fig. 5, col. 1/ln. 11-col. 2/ln. 4, and col. 4/ln. 48- col. 5/ln. 53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for the modified communication system of Chen and Larson to utilize such teaching of Baratz et al. in order to reduce time in selecting the optimum route.

### ***Response to Arguments***

5. Applicant's arguments filed 02/09/10 have been fully considered but they are not persuasive.

The Applicant stated that, "Neither Chen nor Larson (alone or in combination) describe "calculating a propagation delay between the first intermediate node and the second intermediate node" in the manner claimed. That is, neither reference describes using time stamps corresponding to the same message (the claimed "first message") for

Art Unit: 2618

the calculation". In response to the Applicant, Larson discloses such well known time-stamp method (see col. 1/ln. 60-col. 2/ln. 39), wherein the time-stamp is updated at every node traversed by the message, when the message arrived and when the message leaves. Further, Larson also disclose the propagation time (transmission tome) for the message travel from one node to the other (see col. 2/ln. 25-31).

Therefore, the rejection proper.

. The Applicant stated that, "Baratz does not show using a routing algorithm to weight a parameter based on a priority value". In response to the Applicant, Baratz disclose a routing algorithm that utilize a weight parameter in computing that provides the least weight/optimal route (preference or priority) that meet a predetermined standard of performance (see fig. 3, col. 1/ln. 64-col. 2/ln. 4, wherein the selected route is based on the route that provides the least weight or optimal route that meet a predetermined standard of performance). Therefore, the rejection is proper.

The Applicant stated that, "Baratz does not show using a mapping value to determine a degree to which a measured parameter value meets a predefined parameter value". In response to the Applicant, Baratz disclose a routing algorithm that utilize or assigned a weight value in computing that provides the least weight/optimal route (preference or priority) that meet a predetermined standard of performance (see col. 1/ln. 11-col. 2/ln. 4, wherein all the calculated routes are assigned a weight value and the route that provide the least weight value or the optimal path is select, and wherein the least weight value or optimal route that meet a predetermined standard of performance (quality of services/classes). Therefore, the rejection is proper.



**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

6. Applicant's arguments with respect to claims 17-18 and 30 have been considered but are moot in view of the new ground(s) of rejection any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

7. Information regarding the status of an application may be obtained from the

Art Unit: 2618

Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should You have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 10, 2010

/Pablo N Tran/

Primary Examiner, Art Unit 2618